



FortiSwitch Release Notes

VERSION 3.6.4

FORTINET DOCUMENT LIBRARY

<http://docs.fortinet.com>

FORTINET VIDEO GUIDE

<http://video.fortinet.com>

FORTINET BLOG

<https://blog.fortinet.com>

CUSTOMER SERVICE & SUPPORT

<https://support.fortinet.com>

FORTIGATE COOKBOOK

<http://cookbook.fortinet.com>

FORTINET TRAINING SERVICES

<http://www.fortinet.com/training>

FORTIGUARD CENTER

<http://www.fortiguard.com>

END USER LICENSE AGREEMENT

<http://www.fortinet.com/doc/legal/EULA.pdf>

FEEDBACK

Email: techdocs@fortinet.com



January 12, 2018

FortiSwitch 3.6.4 Release Notes

11-364-456048-20180112

TABLE OF CONTENTS

- Change log** 4
- Introduction** 5
 - Supported models 5
 - What’s new in 3.6.4 5
- Special notices** 6
 - Supported features for FortiSwitchOS 3.6 6
 - Default flow-control state changed to disable 11
 - Connecting multiple FSW-R-112D-POE switches 12
- Upgrade information** 13
 - Cooperative Security Fabric upgrade 13
- Product integration and support** 14
 - FortiSwitch 3.6.4 support 14
- Resolved issues** 16
- Known issues** 17

Change log

Date	Change Description
January 12, 2018	Initial release

Introduction

This document provides the following information for FortiSwitch 3.6.4 build: 0399.

- [Supported models on page 5](#)
- [Special notices on page 6](#)
- [Upgrade information on page 13](#)
- [Product integration and support on page 14](#)
- [Resolved issues on page 16](#)
- [Known issues on page 17](#)

See the [Fortinet Document Library](#) for FortiSwitch documentation.

Supported models

FortiSwitch 3.6.4 supports the following models:

FortiSwitch	FSW-108D-POE, FSW-124D, FSW-124D-POE, FSW-224D-FPOE, FSW-224D-POE, FSW-248D-FPOE, FSW-248D-POE, FSW-248D, FSW-424D, FSW-424D-FPOE, FSW-424D-POE, FSW-448D, FSW-448D-FPOE, FSW-448D-POE, FSW-524D-FPOE, FSW-524D, FSW-548D, FSW-548D-FPOE, FSW-1024D, FSW-1048D, FSW-3032D
FortiSwitch Rugged	FSR-112D-POE, FSR-124D

What's new in 3.6.4

Release 3.6.4 provides the following new features:

- Unicast hashing using the source port
- STP supported in MCLAGs
- QoS marking
- MAB reauthentication disabled by default
- Cut-through switching mode for low latency
- Control of how often the temperature and PoE alerts are generated
- Querier for IGMP snooping
- Logging of MAC address learning limit violations
- Persistent (sticky) MAC addresses and static MAC addresses saved to the same table
- Control of forwarding reserved multicast packets and forwarding IPv6 neighbor-discovery packets to the CPU for 124D, 124D-POE, 200 Series, and 400 Series
- New REST API endpoints

Special notices

Supported features for FortiSwitchOS 3.6

The following table lists the FortiSwitch features in Release 3.6 that are supported on each series of FortiSwitch models. All features are available in Release 3.6.0, unless otherwise stated.

Feature	GUI supported	108D-POE 112D-POE	1xxE	124D 124D-POE 200 Series 400 Series	500 Series	1024D 1048D	3032D
Link aggregation group size (maximum number of ports) (See Note 2.)	✓	8	8	8	24/48	24/48	24 (3.5.0) 64 (3.5.1)
Auto module max speed detection and notification	✓	—	—	—	✓	✓	—
IP conflict detection and notification	—	✓	✓	✓	✓	✓	✓
MAC-IP binding	✓	—	—	—	✓	✓	✓
Static BFD	—	—	—	—	—	✓	✓
Hardware-based ECMP	—	—	—	—	✓	✓	✓
Private VLANs	✓	—	—	✓	✓	✓	✓
LLDP transmit	—	✓	—	✓	✓	✓	✓
Loop guard	✓	✓	✓	✓	✓	✓	✓
LAG min-max-bundle	—	✓	✓	✓	✓	✓	✓
sFlow	✓	✓	—	✓	✓	✓	✓
Storm control	✓	✓	✓	✓	✓	✓	✓
ACL	—	—	—	✓	✓	✓	✓
Static L3/hardware-based routing	✓	—	—	✓	✓	✓	✓

Feature	GUI supported	108D-POE 112D-POE	1xxE	124D 124D-POE 200 Series 400 Series	500 Series	1024D 1048D	3032D
Software routing only	✓	✓	✓	—	—	—	—
CPLD software upgrade support for OS	—	—	—	—	—	✓	—
PoE-pre-standard detection (See Note 1.)	✓	✓	FS-1xxE POE	✓	✓	—	—
VLAN tag by ACL	—	—	—	✓	✓	✓	✓
ACL redirect to mirror destination as trunk/LAG	—	—	—	✓	✓	✓	✓
MAC/IP/protocol-based VLAN assignment	✓	✓	—	✓	✓	✓	✓
802.1x port mode	✓	✓	✓	✓	✓	✓	✓
802.1x MAC-based security mode	✓	✓	✓	✓	✓	✓	✓
User-based (802.1x) VLAN assignment	✓	✓	—	✓	✓	✓	✓
Virtual wire	✓	—	—	✓	✓	✓	✓
HTTP REST APIs for configuration and monitoring	—	✓	✓	✓	✓	✓	✓
Split port	—	—	—	—	✓	—	✓
IGMP snooping	—	—	—	✓	✓	✓	✓
Per-port max for learned MACs	—	—	✓	✓	✓	—	—
802.1p support, including priority queuing trunk and WRED (release 3.5.1)	—	—	—	✓	✓	✓	✓
DHCP snooping	—	—	—	✓	✓	✓	✓
LLDP-MED	—	✓	✓	✓	✓	✓	✓

Feature	GUI supported	108D-POE 112D-POE	1xxE	124D 124D-POE 200 Series 400 Series	500 Series	1024D 1048D	3032D
DHCP relay feature	—	—	✓	✓	✓	✓	✓
Support for switch SNMP OID	—	✓	✓	✓	✓	✓	✓
Access VLANs (See Note 5.)	—	—	—	✓	✓	✓	✓
802.1x enhancements, including MAB (release 3.5.1)	✓	✓	✓	✓	✓	✓	✓
Multi-stage load balancing (release 3.5.1)	—	—	—	—	—	✓	✓
MCLAG (multichassis link aggregation)(release 3.6.0)	—	—	—	✓ (not on 124D/124D-POE)	✓	✓	✓
Dynamic layer-3 protocols (OSPF, RIP, and VRRP) (release 3.6.0) (See Note 3.)	✓	—	—	✓ (not on 124D/124D-POE)	✓	✓	✓
Dynamic ARP inspection (release 3.6.0)	—	—	—	✓	✓	✓	✓
Firmware image rotation (dual-firmware image support) (release 3.6.0)	—	✓ (not on 108D-POE)	—	✓	✓	✓	✓
TDR (time-domain reflectometer)/cable diagnostics support (release 3.6.0)	✓	—	—	✓	✓	✓	✓
MAC learning limit (release 3.6.0) (See Note 4.)	—	—	✓	✓	✓	—	—
Sticky MAC on switch interfaces (release 3.6.0)	—	—	—	✓	✓	✓	✓

Feature	GUI supported	108D-POE 112D-POE	1xxE	124D 124D-POE 200 Series 400 Series	500 Series	1024D 1048D	3032D
PoE modes support: first come, first served or priority based (PoE models) (release 3.6.0)	—	✓	FS-1xxE POE	✓	✓	—	✓
ACL: egress mask action support (release 3.6.0)	—	—	—	✓	✓	✓	✓
Monitor system temperature (threshold configuration and SNMP trap support) (release 3.6.0)	—	✓	—	✓	✓	✓	✓
'forced-untagged' or 'force-tagged' setting on switch interfaces (release 3.6.0)	—	✓	—	✓	✓	✓	✓
Selective packet sampling to CPU (useful diagnostic tool) (release 3.6.0)	—	—	—	✓	✓	✓	3.6.1
Add CLI to show the details of port statistics (release 3.6.0)	—	✓	✓	✓	✓	✓	✓
Display progress (%) during firmware upgrade (release 3.6.0)	✓	✓	✓	✓	✓	✓	✓
STP root guard (release 3.6.2)	—	✓	✓	✓	✓	✓	✓
STP BPDU guard (release 3.6.2)	—	✓	✓	✓	✓	✓	✓
IGMP snooping: static multicast groups (release 3.6.2)	—	—	—	✓	✓	✓	✓
DHCP snooping: entry limit per port (release 3.6.2)	—	—	—	✓	✓	✓	✓

Feature	GUI supported	108D-POE 112D-POE	1xxE	124D 124D-POE 200 Series 400 Series	500 Series	1024D 1048D	3032D
Network device detection (release 3.6.2)	—	—	—	✓	✓	✓	✓
QoS queue counters (releases 3.6.2 and 3.6.3)	—	—	—	✓	✓	✓	✓
Support of the RADIUS accounting server (release 3.6.3)	—	✓	—	✓	✓	✓	✓
Support of RADIUS CoA and disconnect messages (release 3.6.3)	—	✓	—	✓	✓	✓	✓
802.1x authentication: EAP-TLS support (release 3.6.3)	—	✓	—	✓	✓	✓	✓
DHCP snooping: CLI for DHCP-snooping server database (release 3.6.3)	—	—	—	✓	✓	✓	✓
Unicast hashing (release 3.6.4)	—	—	—	✓	✓	✓	✓
STP supported in MCLAGs (release 3.6.4)	—	—	—	✓ (not on 124D/124D-POE)	✓	✓	✓
QoS marking (release 3.6.4)	—	—	—	✓	✓	✓	✓
MAB reauthentication disabled (release 3.6.4)	—	✓	—	✓	✓	✓	✓
Cut-through switching (release 3.6.4)	—	—	—	—	—	✓	✓
Control of temperature and PoE alerts (release 3.6.4)	—	✓	—	✓	✓	✓	✓
IGMP querier (release 3.6.4)	—	—	—	✓	✓	✓	✓

Feature	GUI supported	108D-POE 112D-POE	1xxE	124D 124D-POE 200 Series 400 Series	500 Series	1024D 1048D	3032D
Configuration of the QSFP low-power mode (release 3.6.4)	—	—	—	—	✓	1048D	✓
Learning limit violation log (release 3.6.4) (See Note 4.)	—	—	—	✓	✓	—	—
Sticky MAC addresses saved to static MAC table (release 3.6.4)	—	—	—	✓	✓	✓	✓
Enabling packet forwarding to CPU (release 3.6.4)	—	—	—	✓	—	—	—

Notes

- PoE features are applicable only to the model numbers with a POE or FPOE suffix.
- 24-port LAG is applicable to 524D, 524_FPOE, 1024D, and 3032D models. 48-port LAG is applicable to 548D, 548_FPOE, and 1048D models.
- To use the dynamic layer-3 protocols, you must have an advanced features license.
- The per-VLAN learning limit and per-trunk learning limit are not supported on dual-chip platforms (248 and 448 series).

Default flow-control state changed to disable

This change allows a port to ignore the pause frame it receives. You can still enable flow control on a port if so desired by using the following CLI commands:

To enable flow control on *both RX and TX*:

```
S548DN4K16000360 # config switch physical-port
S548DN4K16000360 (physical-port) # edit port9
S548DN4K16000360 (port9) # set flow-control both
```

To enable flow control on RX only:

```
S548DN4K16000360 # config switch physical-port
S548DN4K16000360 (physical-port) # edit port9
S548DN4K16000360 (port9) # set flow-control rx
```

To enable flow control on TX only:

```
S548DN4K16000360 # config switch physical-port
S548DN4K16000360 (physical-port) # edit port9
```

```
S548DN4K16000360 (port9) # set flow-control tx
```

Connecting multiple FSW-R-112D-POE switches

The FSW-R-112D-POE switch does not support interconnectivity to other FSW-R-112D-POE switches using the PoE ports. Fortinet recommends using the SFP ports to interconnect switches.

Upgrade information

FortiSwitch 3.6.4 supports upgrading from FortiSwitch 3.5.0 and later.

Cooperative Security Fabric upgrade

FortiOS 5.4.1 greatly increases the interoperability between other Fortinet products. This includes:

- FortiClient 5.4.1
- FortiClient EMS 1.0.1
- FortiAP 5.4.1
- FortiSwitch 3.4.2

The upgrade of the firmware for each product must be completed in a precise order so the network connectivity is maintained without the need of manual steps. Customers must read the following two documents prior to upgrading any product in their network:

- *Cooperative Security Framework - Upgrade Guide*
- *FortiOS 5.4.0 to 5.4.1 Upgrade Guide for Managed FortiSwitch Devices*

This document is available in the Customer Support Firmware Images download directory for FortiSwitch 3.4.2.

Product integration and support

FortiSwitch 3.6.4 support

The following table lists 3.6.4 product integration and support information.

Web browser	<ul style="list-style-type: none">• Microsoft Internet Explorer version 11• Mozilla Firefox version 52• Google Chrome version 56 <p>Other web browsers may function correctly, but are not supported by Fortinet.</p>
--------------------	---

**FortiOS
(FortiLink Support)**

- 5.4.1 and later
FortiSwitch must be upgraded first before upgrading FortiOS. Please read the *Upgrade Information > Cooperative Security Fabric Upgrade* section in this document.
- 5.4.0
FortiSwitch models: FSW-108D-POE, FSW-124D, FSW-124D-POE, FSW-224D-POE, FSW-224D-FPOE, FSW-248D-POE, FSW-248D-FPOE, FSW-424D, FSW-424D-POE, FSW-424D-FPOE, FSW-448D, FSW-448D-POE, FSW-448D-FPOE, FSW-524D, FSW-524D-FPOE, FSW-548D, FSW-548D-FPOE, FSW-1024D, FSW-1048D, FSW-3032D, FSR-112D-POE

FortiGate models: FG-60D, FG-60D-POE, FG-90D, FG-90-POE, FG-100D, FG-140D, FG-140D-POE, FG-140D-POE-T1, FG-200D, FG-240D, FG-280D, FG-280D-POE, FG-600C, FG-800C, FG-1000C, FG-1500D, FG-1200D, FG-3700D, FG-3700DX

FortiWiFi models: FWF-60D, FWF-60D-POE, FWF-90D, FWF-90D-POE
- 5.2.3 and later
FortiSwitch models: FSW-108D-POE, FSW-124D, FSW-124D-POE, FSW-224D-POE, FSW-224D-FPOE, FSR-112D-POE

FortiGate models: FG-60D, FG-90D, FG-100D, FG-140D, FG-200D, FG-240D, FG-280D, FG-600C, FG-800C, FG-1000C, FG-60D-POE, FG-90D-POE, FG-140D-POE, FG-140D-POE-T1, FG-280D-POE

FortiWiFi models: FWF-60D, FWF-60D-POE, FWF-90D, FWF-90D-POE
- 5.2.2
FortiSwitch models: FSW-224D-POE

FortiGate models: FG-90D, FG-90D-POE, FG-100D, FG-140D, FG-140D-POE, FG-140D-POE-T1, FG-200D, FG-240D, FG-280D, FG-280D-POE, FG-600C, FG-800C, FG-1000C

FortiWiFi models: FWF-90D, FWF-90D-POE

Resolved issues

The following issues have been fixed in 3.6.4. For inquiries about a particular bug, please contact [Customer Service & Support](#).

Bug ID	Description
456947	After upgrading to FortiSwitchOS 3.6.3, DHCP relay stops working.
440045	Configuring VLANs that have IGMP snooping enabled is slow.
434680, 408242	Modifying or disabling a split port does not remove entries.

Known issues

The following known issues have been identified with 3.6.4. For inquiries about a particular bug or to report a bug, please contact [Fortinet Customer Service & Support](#).

Bug ID	Description
391607	Switch does not send gratuitous ARP for IP conflict when the system boots up and adds a new switch virtual interface (SVI).
414972	IGMP snooping might not work correctly when used with 802.1x Dynamic VLAN functionality.
416655	IGMP snooping might not work correctly when used with 802.1x Dynamic VLAN functionality.
417024, 438441	DHCP client lease time on PVLAN is inaccurate.
417073, 438441	DHCP MAC address client is learned on Primary VLAN instead of the isolated VLAN.
417099, 438441	The system shows no DAI stats entry on PVLAN ports.
423940	In some cases, the MAC address and VLAN ID are shown (diagnostic command) twice on the same interface after splitting ports.
380239	IGMP-snooped multicast groups are not immediately flushed out of the snooping table when the querier port is shut down.
460999	<p>When you enable Energy Efficiency Ethernet (EEE) on an Apple Thunderbolt to Gigabit Ethernet Adapter, the FortiSwitch port might flap continuously.</p> <p>Workaround: If you are using MacBook with the Apple Thunderbolt to Gigabit Ethernet Adapter, disable EEE on the Apple Thunderbolt to Gigabit Ethernet Adapter when connecting to the FortiSwitch.</p>



Copyright© 2018 Fortinet, Inc. All rights reserved. Fortinet®, FortiGate®, FortiCare® and FortiGuard®, and certain other marks are registered trademarks of Fortinet, Inc., in the U.S. and other jurisdictions, and other Fortinet names herein may also be registered and/or common law trademarks of Fortinet. All other product or company names may be trademarks of their respective owners. Performance and other metrics contained herein were attained in internal lab tests under ideal conditions, and actual performance and other results may vary. Network variables, different network environments and other conditions may affect performance results. Nothing herein represents any binding commitment by Fortinet, and Fortinet disclaims all warranties, whether express or implied, except to the extent Fortinet enters a binding written contract, signed by Fortinet's General Counsel, with a purchaser that expressly warrants that the identified product will perform according to certain expressly-identified performance metrics and, in such event, only the specific performance metrics expressly identified in such binding written contract shall be binding on Fortinet. For absolute clarity, any such warranty will be limited to performance in the same ideal conditions as in Fortinet's internal lab tests. In no event does Fortinet make any commitment related to future deliverables, features or development, and circumstances may change such that any forward-looking statements herein are not accurate. Fortinet disclaims in full any covenants, representations, and guarantees pursuant hereto, whether express or implied. Fortinet reserves the right to change, modify, transfer, or otherwise revise this publication without notice, and the most current version of the publication shall be applicable.